

## ABSTRACT OF DISCLOSURE

An IPv6 header receiving apparatus and an IPv6 header processing method includes a register with a data size that is a multiple of an octet and modules for an IPv6 basic header or various types of IPv6 extended headers. The register receives IPv6 header data in units of an octet, stores the IPv6 header data, and transmits the stored IPv6 header data to an IPv6 processing module for that corresponds to the IPv6 header data. The modules receive the IPv6 header data from the register and process the IPv6 header data. Accordingly, IPv6 header data can be processed in real-time without wasting memory.